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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/767,552	01/29/2004	Mathew K. S. Lum	38190/267204	5082

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EXAMINER	
SMITH, RICHARD A	

ART UNIT	PAPER NUMBER
2859	

DATE MAILED: 05/13/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/767,552	LUM ET AL.	
	Examiner	Art Unit	
	R. Alexander Smith	2859	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *23 February 2005*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-12,14-36,38 and 39* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☒ Claim(s) *1-9 and 17-25* is/are allowed.

6)☒ Claim(s) *10-12,14,16,26-36,38 and 39* is/are rejected.

7)☒ Claim(s) *15* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 10, 11, 14 and 16 are finally rejected under 35 U.S.C. 102(b) as being anticipated by U.S. 4,543,725 to Golinelli et al.

Golinelli et al. discloses an apparatus having the limitations of claims 10, 11, 14 and 16 when the hinge is elements 6-8, the gap is on the other side and measured by the magnetic core on stem 32 attached to 29 of the first template member 5 and its movement within transducer windings 52 attached to 28 of the second template member 4, the urging device being 18, the gap adjustment limits being set by 24, 25, 19, 20 and 23.

With respect to said first and second template members cooperably defining an aperture defining a cross-sectional reference shape of the tubular member: In a broad sense, the defining of a cross-sectional reference shape as claimed is met by the measurement of the tubular member's shape once the tubular member is inserted within the aperture.

3. Claims 10, 11, 14 and 16 are finally rejected under 35 U.S.C. 102(b) as being anticipated by U.S. 5,335,422 to Ferguson

Ferguson discloses an apparatus having the limitations of claims 10, 11, 14 and 16 when the hinge is element 24, the gap is 78 on the other side and measured by an LVDT, the urging device being 72.

With respect to said first and second template members cooperably defining an aperture defining a cross-sectional reference shape of the tubular member: In a broad sense, the defining of a cross-sectional reference shape as claimed is met by the measurement of the tubular member's shape once the tubular member is inserted within the aperture.

4. Claims 26, 27, 31-34 and 38 are finally rejected under 35 U.S.C. 102(b) as being anticipated by U.S. 4,240,206 to Baresh et al.

Baresh et al. discloses an apparatus having the limitations of claims 26, 27, 31 and 38 when the hinge is elements at 110 of figure 6, the plurality of measurement devices are 106a and 106b, the output characteristic of the contact force is as shown in figure 1, and the urging device is 112.

With respect to said first and second template members cooperably defining an aperture defining a cross-sectional reference shape of the tubular member: In a broad sense, the defining of a cross-sectional reference shape as claimed is met by the measurement of the tubular member's shape once the tubular member is inserted within the aperture.

With respect to claims 32-34 and 37: the method steps will be met during the normal operation of the apparatus disclosed by Baresh et al.

With respect to claim 38 and "substantially contact", this condition is met when substantially means real not imaginary or ample. Please see the response to arguments.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

6. Claim 12 is finally rejected under 35 U.S.C. 103(a) as being unpatentable over Golinelli et al. in view of U.S. 6,457,338 to Frenken.

Golinelli et al. teaches all that is claimed as discussed in the above rejections of claims 10, 11, 14 and 16 except for the measurement device is an electronic device.

Frenken discloses an apparatus wherein the measurement device can be a mechanical, electronic or electrical sensor. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to make the measurement device, taught by Golinelli et al., an electronic device, as taught by Frenken, since Frenken teaches that the various sensors can be used in the alternative and since the output of an electronic measurement device can be easily processed by a computer or display unit.

7. Claims 28, 29 and 35 are finally rejected under 35 U.S.C. 103(a) as being unpatentable over Baresh et al. in view of U.S. 4,807,479 to Sako et al.

Baresh et al. teaches all that is claimed as discussed in the above rejections of claims 26, 27, 31-34 and 38 except for the aperture being generally circular and each measurement device being configured to measure at least one of a force, pressure and stress that is representative of the stiffness of the tubular member.

Sako discloses a device having a generally circular aperture and a sensor configured to measure at least one of a force, pressure and stress in a tubular member. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify and enhance the apparatus and the method, taught by Baresh et al., to include a circular aperture and to include sensors configured to measure at least one of a force, pressure and stress in a tubular member, as taught by Sako, in order to protect the user should the tubular member split or burst upon pressure, and to increase the versatility of the device to measure more than dimension.

With respect to the intended use of the apparatus, i.e., representative of the stiffness of the tubular member in claim 29: this intended use has not been given any patentable weight since

it has been held that a recitation with respect to the manner in which a claimed apparatus is intended to be employed does not differentiate the claimed apparatus from a prior art apparatus satisfying the claimed structural limitations. Ex parte Masham, 2 USPQ2d 1647 (1987).

8. Claims 30 and 36 are finally rejected under 35 U.S.C. 103(a) as being unpatentable over Baresh et al. in view of J.P. 362228302A to Keyakida.

Baresh et al. teaches all that is claimed as discussed in the above rejections of claims 26, 27, 31-34 and 38 except for the apparatus being configured to determine a variation of the thickness.

Keyakida discloses an apparatus for measuring tubes wherein the sensor box (8) can employ an outer diameter sensor, mill scale sensor, and a wall thickness sensor. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify the sensor and method, taught by Baresh et al., by replacing the sensors with thickness sensors, as suggested by Keyakida, or by including thickness sensors, as taught by Keyakida, in order to check the tube for cracks or flaws.

9. Claim 39 is finally rejected under 35 U.S.C. 103(a) as being unpatentable over Baresh et al.

Baresh et al. teaches all that is claimed as discussed in the above rejections of claims 26, 27, 31-34 and 38 except for the apparatus comprising at least three measurement devices.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to add at least a third measurement device, since it has been held that mere

duplication of the essential working parts of a device involves only routine skill in the art, St. Regis Paper Co. v Bemis Co., 193 USPQ 8, and since this would allow a more accurate determination of the ovality of the tube.

Response to Arguments

10. Applicant's arguments filed February 14, 2005 with respect to claims 10-12, 14-16 and 26-36, 38 and 39 have been fully considered but they are not persuasive.

With respect to Golinelli et al. and Ferguson and argument C:

The argument with respect to "substantially" is not persuasive since it appears to the examiner that the first and second templates are configured, via the feelers mounted to the templates of Golinelli et al. and via the wheels mounted to the templates of Ferguson, to be in substantial (i.e., real not imaginary, or ample) contact with the outer circumference of the tubular member or else measurements could not be taken. If the applicant's intent via the argument is to state that the template members are configured to contact, or substantially contact, a majority of the outer circumference, this limitation is not disclosed in the claim.

With respect to the feelers and wheels are not template members, the examiner disagrees because the claims are comprising claims and because the feelers and wheels are permanently mounted and are part of the templates that move in order to determine the diameters.

With respect to the template members or aperture does not define a generally circular cross-sectional shape: The claim states "first and second rigid template members cooperably defining an aperture defining a generally circular cross-sectional reference shape." The template members cooperably define the aperture. The aperture defines a generally circular cross-sectional shape. *There is no limitation that states that the aperture itself takes or has a generally circular cross-sectional shape, only that the aperture defines a generally cross-sectional shape.* This is achieved when the aperture with the template members surrounding it measure diameters for generally circular cross-sectional shapes and by the actual taking of the measurements.

With respect to Frenken and claim 10: The examiner agrees, however, this reference was not relied upon for the rejection of claim 10.

With respect arguments D:

The arguments mainly presented and underlined on page 17 are not persuasive since it appears to the examiner that Baresh does meet the limitations as claimed.

With respect to "Baresh does not teach or suggest measurement devices that are configured to contact the tubular member ... ... the displacement of the moveable cores." The examiner does not find these arguments persuasive for the following reasons: In order to take the measurements the LVDT's must maintain a contact force with tubular member in the closed position as shown in figure 6 or else the measurements of ovality of the tube cannot be taken. This is achieved via spring 112, springs 52 or other bias means. The resulting output characteristic is the linear movements of the cores and the output signals derived therefrom

which are indicative of a measurement of the tubular member, i.e., its ovality. This appears to the examiner as addressing the limitations as claimed.

With respect to the first and second template members that define a cross-sectional reference shape: The claim states "first and second rigid template members cooperably defining an aperture generally defining a circular cross-sectional reference shape." The template members cooperably define the aperture. The aperture generally defines a circular cross-sectional shape. *There is no limitation that states that the aperture itself takes or has a generally circular cross-sectional shape, only that the aperture defines a generally cross-sectional shape.* This is achieved when the aperture with the template members surrounding it measure diameters for generally circular cross-sectional shapes and by the actual taking of the measurements.

With respect to Baresh in view of Sako and said measurements being indicative of a stiffness: Sako does disclose the detection of at least one of a force, pressure and stress, which are representative of stiffness.

Allowable Subject Matter

11. Claims 1-9 and 17-25 are allowable.

12. Claim 15 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten to include all of the limitations of the base claim and any intervening claims.

13. As allowable subject matter has been indicated, applicant's reply must either comply with all formal requirements or specifically traverse each requirement not complied with. See 37 CFR 1.111(b) and MPEP § 707.07(a).

Conclusion

14. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

15. Any inquiry concerning this communication or earlier communications from the examiner should be directed to R. Alexander Smith whose telephone number is 571-272-2251. The examiner can normally be reached on Monday through Friday from 9:30-6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Diego F. Gutierrez can be reached on 571-272-2245. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

R. Alexander Smith
Primary Examiner
Technology Center 2800

RAS
May 11, 2005